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EPIC/P&DS/D/6-328
3 March 1966

MEMORANDUM FOR: Chief, Production Services Division, EPIC

25X1 SUBJECT: [REDACTED] High Resolution Step and Repeat Printer
(Printer # 2)

1. Recently tests have been conducted at the contractor's plant by P&DS to determine the resolution capability of the breadboard for printer # 2. Using an Air Force three-bar high contrast 800 l/mm target, a series of tests were run on type 8430 film. Results varied from group 8 step 1 (317 l/mm) to group 8 step 3 (397 l/mm) giving an average of about 350 l/mm.

2. The contractor claims that by using an optically flat platen with good ultra violet transmission characteristics and better light collimation that the first model will readily achieve 400 l/mm on type 8430 film. This claim appears to be technically feasible and reasonable.

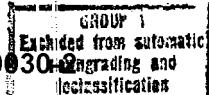
3. In essence the first model of printer # 2 will be a high resolution step and repeat printer capable of attaining 400 l/mm resolution on type 8430 film, printing frames up to 30 inches in length and up to 9 $\frac{1}{2}$ inches in width, and incorporating a frame sensing device for automatic operation. The frame sensing device has been tested successfully for printer # 1 at GDNRADA.

25X1 4. The [REDACTED] step and repeat contact printer demonstrates the following advantages in advancing the state-of-the-art with respect to contact printing.

a. The ability to produce uniform exposure over a full 30 inch frame is accomplished by the use of a unique traveling mercury vapor light source. The traveling light source (slit) also provides automatic exposure control.

b. The unusual approach of a rolling air bag provides uniform contact between the negative and printing stock and therefore results in a higher resolution flat-bed contact printer than any previous flat-bed printers utilizing a stationary air bag.

c. It provides a significant first step in the partial automation of multi-duplication of selected exposures on a given roll.



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5. To date NPIC has expended [] on printer # 2 and
CDIRADA [] on printer # 1. The funds required to complete
printer # 2 are [] for printer # 1. All costs
related to printer # 1 will be paid by CDIRADA. Before PADS can make
a final decision whether to cancel the contract for printer # 2 or
approve an overrun/change in scope of [] to complete the first
model it would be helpful to have a definite recommendation from PDS -
the ultimate user.

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There are three alternatives:

- (1) Cancel the contract and receive no equipment.
Termination costs would probably be at least [] above
the [] already expended.
- (2) Complete the first model printer and operationally
test in PDS.
- (3) Complete the first model printer, and under the
direction of PDS test and de-bug at [] or a
commercial facility and upon demonstrated acceptable per-
formance turn over to PRO for operational use.

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6. We would appreciate your advising us as to your recommendations
on the alternatives presented in paragraph 5. by 11 March in order
that our contract monitor, who will be visiting [] on 14 March,
may initiate the proper course of action.

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[]
Colonel, USAF
Assistant for Plans and Development, NPIC

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NPIC/PADS/DB? [] (2 Mar 1966)

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